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***HETEROTERMES TENUIS* (ISOPTERA: RHINOTERMITIDAE):
NEW RECORD FROM VENEZUELA.**

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Heterotermes Froggat (Isoptera: Rhinotermitidae) is a genus of subterranean termites comprising several major pest species. *Heterotermes* tunnel and feed on wood in contact with soil (Nickle & Collins 1992) and forage for wood above ground. This genus has been reported in the West Indies, Panama, Venezuela, Brazil, Ecuador, and several islands of the Caribbean (Emerson 1971; Nickle & Collins 1992; Constantino 2002; Szalanski et al. 2004). The last checklist of the termites from Venezuela (Issa 2000), the list by Snyder (1959), and Constantino (2000) reported only *H. convexinotatus* (Snyder) and *H. crinitus* (Emerson). In this note we report *H. tenuis* (Hagen) for the first time in Venezuela.

Samples of *H. tenuis* were collected from diverse localities in Venezuela. Specimens from Chaguaramas (Monagas state) were collected from wood lying on the soil and under dry bark of pine (*Pinus caribaea*), and had tunnels consisting of wood, sand, and clay. All samples were stored in 80% alcohol. Measurements of soldiers were performed with a stereomicroscope fitted with an ocular micrometer. The measurements included head length, head width, and pronotum width. Voucher specimens are maintained at the Laboratorio de Comportamiento of the Simón Bolívar University. The specific identifications were made with the key from Constantino (2000).

We found that *H. tenuis* is distributed around the northeastern and southern Venezuela in several habitats (Fig. 1), and is present at different altitudes from 10 to 1100 m (Table 1). The specimens found were soldiers and workers. We found minor soldiers only in the sample from Los Cerritos (Fig. 2, Constantino 2000). The measurements for *H. tenuis* ($n = 14$ major soldiers) were $3.0 \pm$



Fig. 1. Distribution of *Heterotermes tenuis* in Venezuela.

0.24 mm (mean \pm SD) for head length, 1.1 ± 0.03 mm for head width, and 0.8 ± 0.0001 for pronotum width. For the minor soldiers ($n = 1$) the measurements were 2.68, 1.08, and 0.79 mm of head length, head width, and pronotum width, respectively. This has not been collected from structures in Venezuela. Constantino (2002) reports that *H. tenuis* is a minor pest of structures and a major pest of agriculture in some locations in South America.

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TABLE 1. LOCALITIES AND DISTRIBUTION OF *HETEROTERMES TENUIS*.

Map number	Place	State	Altitude (m)	Longitude/Latitude	Habitat
1	Los Cerritos	Aragua	200	10°27'N/67°35'W	Secondary forest
2	Canoabo	Carabobo	950	10°17'N/67°14'W	Plantation
3	Maturín	Monagas	110	8°41'N/62°45'W	Urban
4	Chaguaramas	Monagas	110	8°20'N/62°30'W	Pines forest (<i>Pinus caribaea</i>)
5	El Peñón	Sucre	10	10°26'N/62°30'W	Secondary forest
6	Parupa	Bolívar	1,500	4°30'N/60°50'W	Plains
7	El Paují	Bolívar	800	4°28'N/61°35'W	Plains

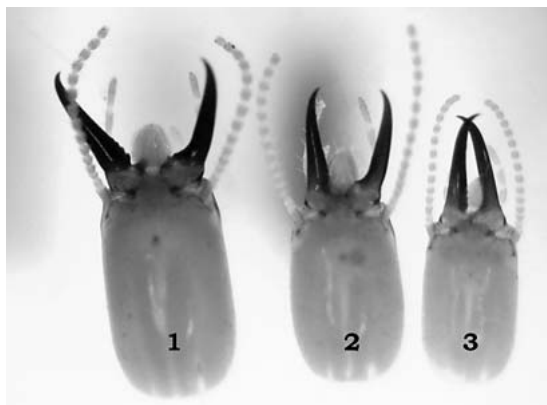


Fig. 2. Ventral view of head of soldier from *Heterotermes tenuis* (major soldier)¹, *H. tenuis* (minor soldier)², and *H. convexinotatus*³ from Venezuela.

SUMMARY

The termite *Heterotermes tenuis* (Hagen) is reported from Venezuela for the first time. Specimens were found at several localities in the country including near the coast at the north of the country, and places near Gran Sabana at the south near the Brazilian frontier. The species was collected at different altitudes and habitat.

REFERENCES CITED

- CONTANSTINO, R. 1998. Catalog of Living Termites of the New World (Insecta: Isoptera). *Arquivos de Zoologia* 35: 135-231.
- COSTANSTINO, R. 2000. Key to the soldiers of South America *Heterotermes* with a new species from Brazil (Isoptera: Rhinotermitidae). *Insect Systematics and Evolution* 31: 463-471.
- CONSTANTINO, R. 2002. The pest termites of South America: taxonomy, distribution, and status. *J. Applied Entomol.* 126: 355-365.
- EMERSON, A. 1971. Tertiary fossil species of the Rhinotermitidae (Isoptera), phylogeny of genera, and reciprocal phylogeny of associated Flagellata (Protozoa) and Staphylinidae (Coleoptera). *Bull. American Mus. Natural Hist.* 146: 243-304.
- ISSA, S. 2000. A checklist of termites from Venezuela (Isoptera: Kalotermitidae, Rhinotermitidae, Termitidae). *Florida Entomol.* 83: 379-382.
- NICKLE, D., AND M. COLLINS. 1992. Termites of Panama (Isoptera), pp. 208-248 *In* D. Quintero and A. Aiello [eds.], *Insects of Panama and Mesoamerica*. Oxford University Press. 150 pp.
- SNYDER, T. 1959. New termites from Venezuela, with keys and list of described Venezuelan species. *American Midland Naturalist* 61: 313-321.
- SZALANSKI, A., R. SCHEFFRAHN, J. AUSTIN, J. KRECEK, AND N.-Y. SU. 2004. Molecular phylogeny and biogeography of *Heterotermes* (Isoptera:Rhinotermitidae) in the West Indies. *Ann. Entomol. Soc. America* 97: 556-566.